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The Ice Age Trail in Maine: An Experience for Geo/Eco-travelers

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Final Report for Period: 06/2007 - 06/2007

Submitted on: 07/10/2007

Principal Investigator: Borns, Harold W.

Award ID: 0334101

Organization: University of Maine

Submitted By:

Title:

The Ice Age Trail in Maine: An Experience for Geo/Eco-travelers

Project Participants

Senior Personnel

Name: Borns, Jr, Harold

Worked for more than 160 Hours: Yes

Contribution to Project:

Harold Borns' involvement as PI is as described in the grant proposal. He has been primarily responsible for all aspects of the work and as such has made the major scientific contribution to the project along with overseeing all other aspects.

Name: Hermann, Michael

Worked for more than 160 Hours: Yes

Contribution to Project:

He is the map digital designer

Name: Thompson, Dr. Woodrow

Worked for more than 160 Hours: Yes

Contribution to Project:

Geologist, Maine Geological Survey

Name: Smith, Dr. David

Worked for more than 160 Hours: Yes

Contribution to Project:

Historian, University of Maine

Name: Zielinski, Ann

Worked for more than 160 Hours: Yes

Contribution to Project:

Website designer

Post-doc

Graduate Student

Undergraduate Student

Technician, Programmer

Other Participant

Research Experience for Undergraduates

Organizational Partners

Maine Geological Survey

Down East Area Regional Tourism

This organization took the project on as one of their committees and has provided the project with enormous help and insight in dealing with units of Maine State and County governments and with individuals impacted by the trail.

University of Maine Public relations

Public Relations services of the University of Maine, Chief Interpreter Ranger, Acadia National Park has provided help in understanding how best to present written and map information for public understanding and has allowed the map to use informational stops within the park.

Maine Department of Transportation (MDOT)

With the exception of three stops on private property the remaining stops are on public roads. The Safety Officer of MDOT has spent several days traversing its trail indicating where to locate safe stops on the highways to coordinate with the scientific features to be observed. On going discussions will result in MDOT's modification of the shoulders of the road to accommodate safer parking and advise on proper signage for each site.

The U-Haul Company

The U-Haul Company has designed a graphic for the Ice Age Trail: Down East in their Exploration Series and it is now traveling the United States on 1200 U-Haul trucks and trailers.

Other Collaborators or Contacts

nothing yet to report

Activities and Findings**Research and Education Activities:**

1. The major activity of the project was to modify the existing knowledge (largely gathered with NSF funding) of the late glacial deposits and history of the deglaciation of the eastern coastal zone of Maine, and to compile it into an eco/geo tourism map and guide at the level of understanding of a person with at least a high school education. The primary focus of the map and guide is education.
2. The major product is Maine's Ice Age Trail: Down East - a map and guide. The major work was not research but rather compilation of data for a specific use by the public.
3. The development opportunity was primarily focussed on the work of the Designing Cartographer. This was a new direction for his digital designing capabilities in working with not only established cartography principals but with scientists and historians to produce a product suitable for the general public with high school level of understanding.

In addition to cartography, the ad hoc committee gathered for the project was responsible for the design of a trail website with links to other websites such as those of Maine Office of Tourism, Acadia National Parks, county government offices and Maine Department of Education. The committee also thought through ways of institutionalizing the map so that the project would continue into the future. Several possibilities were evaluated and the conclusion was to put the map and an oversite committee within the Climate Change Institute of the University of Maine using the University Bookstore as the distributor.

4. The outreach efforts for the map are on going. During the project about 100 lectures were given, primarily within the areas of the trail, describing the project and soliciting public comments to groups ranging from government units, historical societies, natural history groups such as the Audubon Society, tourism businesses and school groups.

Field excursions on parts of the trail were made for interested groups including blueberry industry workers, National Park rangers, university and high school classes and historic societies, for examples. At least 15 public school groups (8-12 grades) were visited after the first 10,000 maps were produced to discuss the glacial history and to help the teachers integrate the map into their curriculum dealing with natural or earth sciences. Many of the initial visits were allowed by later discussions with groups of teachers to further increase their understanding of the regional history.

Findings:

N/A

Training and Development:

N/A

Outreach Activities:

About 100 talks on the trail have been given to a wide variety of audiences including, for example, public schools, colleges, historical societies, senior colleges, county administrative groups, etc.

Journal Publications**Books or Other One-time Publications****Web/Internet Site****Other Specific Products****Product Type:****Trail Map and guide****Product Description:**

This project has resulted in one product in two versions.

a. Maine's Ice Age Trail: Down East map and guide. This publication is a 3' x 2' sheet of high quality coated paper with a colored geological map and legend on one side displaying some basic text on the Ice Age in general and in Maine in particular. In addition all of the stops along the trail are indicated and numbered. On the reverse side all of the 46 stops are indicated with explanatory text and how to locate the stop in detail. Most explanations also include colored photos of what is seen at each stop. In addition to stops more text concerning the Ice Age history of this coastal zone is presented along with appropriate diagrams and figures. The entire map and guide is presented in a manner to be understandable for anyone with a high school or higher education and is folded with an accordion pleat for ease of handling. In addition it contains latitude and longitude markings for finding locations with Global Positioning Instruments and symbols indicating the locations of motels, gas stations and restaurants. Ten thousand maps were produced for complimentary distribution and all but 400 have been distributed, primarily within the map area to schools, and town, state, county and federal offices. In addition they have been placed in Maine Office of Tourism outlets and Acadia and Campobello National Parks. Another 10,000 maps and guide have now been produced for sale abroad through the University Bookstore. This map and guide is basically the same as the complimentary copy but it has a few minor text and photo changes and is printed on a very durable thin plastic in more vivid colors. The profit from this map will be used to republish future maps and to support the minor costs, such as car millage, of the Ice Age Trail Project oversite committee that reports to the Director of the Climate Change Institute of the University of Maine.

We have created a website for the project. It is complete in its coverage but will be enhanced with greater detail as new funds become available in the near future.

Ice Age Trail: Down East website is <http://iceagetrail.umaine.edu>.

Sharing Information:

This product is available at the University of Maine bookstore

Contributions**Contributions within Discipline:**

Principal discipline: glacial and Quaternary geology. The major contribution has been the embedding of the unique and previously known glacial and glacial marine geology of eastern coastal Maine into the public sector in the form of an eco/geo tourism map and guide. This is an educational tool for use by schools students, decision makers regarding uses of the regional natural resources and by eco/geo tourists with a high school or higher level of education.

Other disciplines: Prehistoric archaeology, paleoecology and history. Aspects of these disciplines are used to add to or emphasize aspects of the late glacial history of this coastal zone.

Contributions to Other Disciplines:

In describing the Ice Age history the map and guide integrate geology archeology, history and ecology for the good of all.

Contributions to Human Resource Development:

The eco/geo tourism map and guide contribute to the education of public school, especially grades 8-12, the general touring public and governmental decision makers.

Contributions to Resources for Research and Education:

1. the product is used by eco/geo travelers in general
2. the product is being used as part of the Earth Science programs in 25 public schools in areas of the map - this will now be promoted beyond the map area.
3. the product is used in county planning offices.
4. the product is being used in offerings of several Senior Colleges.

Contributions Beyond Science and Engineering:

The product is being used by commercial ecotourism companies.

Conference Proceedings

Categories for which nothing is reported:

Any Journal

Any Book

Any Web/Internet Site

Any Conference